

BYFORD (H.T.)

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THE INTESTINAL TREATMENT OF TUBERCULOUS PERITONITIS.¹

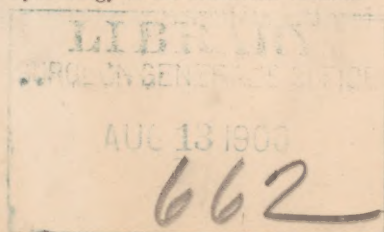
By HENRY T. BYFORD, M.D.,
OF CHICAGO,

PROFESSOR OF GYNÆCOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF
CHICAGO; PROFESSOR OF CLINICAL GYNÆCOLOGY IN THE NORTH-
WESTERN UNIVERSITY WOMAN'S MEDICAL SCHOOL.

IN his "Principles and Practice of Medicine" Osler uses these words: "The treatment of tubercular peritonitis has fallen largely into the hands of the surgeons." And, after a long search among medical text-books, I ceased to wonder at this, for I could get but little information upon the medical treatment. Therefore the average practitioner, who depends upon his text-books, would seem to have no way of learning how to treat it. He is taught to treat peritonitis by opium, rest, etc., and to send the case to the surgeon.

The fact that improvement takes place after an abdominal incision, in cases of tubercular peritonitis, has led many surgeons to look upon the procedure as a cure. If, however, we believe with von Winckel that five years should elapse before the patient is considered cured, and remember that only about 15 per cent. have been under observation more than two years (Max Nassauer, *Münchener medicinische Wochenschrift*, April 19, 1898; "American Year-Book for 1899"), we must infer that such an opinion is premature. A case of my own may serve as a sample. I reported the young woman as teaching school eighteen months after the operation and, according to information given me, in good health. At the end of three years I received word that she was dead.

¹ Read in the Section of Obstetrics and Gynæcology of the American Medical Association at Columbus, June, 1899.



On account of the uncertainty of the reported cures I have not taken the time to tabulate them. I have, however, been struck with the similarity, in some recent reports, of the results of medical and surgical treatment.

F. Schroeder (*Inaugural Dissertation*, Bonn, 1897) reports upon twenty-four cases treated in the medical clinic at Bonn, with the following results: Deaths, 33 per cent.; unimproved, 20 per cent.; discharged about cured, 41 per cent.

Parker Sims (*Medical Record*, April 2, 1898), in reviewing the subject, says that some writers claim cures in 30 per cent., others in 24 per cent., by abdominal incision. His own conclusion is that improvement occurs in about 80 per cent., and a permanent cure in about 30 per cent.

Here we have 20 per cent. unimproved in the medical treatment against 80 per cent. improved in the surgical, and 41 per cent. discharged about cured by medical treatment against a permanent cure in about 30 per cent. by incision.

The treatment by abdominal incision, which is undoubtedly followed by immediate benefit, must still bear the burden of proving that the ultimate results are the better. Some cases have undoubtedly been demonstrated to be cured by a subsequent abdominal section; but, on the other hand, subsequent abdominal sections, in cases that had shown improvement, have demonstrated uninterrupted progress in the disease (M. Jaffe, Ueber den Werth der Laparotomie als Heilmittel gegen Bauchfelltuberkulose, *Centralblatt für Gynäkologie*, No. 40, 1898).

The most suspicious fact of all, in these cases that show improvement, is that no one can find out how or why the improvement takes place. It is not from the removal of fluid, because tapping does not produce the same improvement, and because cases without fluid accumulation are also benefited by it. It is not the exposure to air or light, because a quick operation works better than a long one. It is not anything that destroys the bacilli, because the introduction of germicides does not materially affect the results. To say with Tait that opening the abdomen produces a change in the physiologic char-

acter of the peritoneum, which enables it to destroy the tubercle bacillus, is contrary to our experience with the peritoneal cavity, for we know that to open the peritoneal cavity and expose it to air impairs the functions of the peritoneum from A to Z. It is said that the cure is produced by increased phagocytosis. But do not the new conditions that call for phagocytosis require all of the phagocytes and, perhaps, more for their own cure?

I have come to the conclusion that there is some benefit connected with the abdominal incision that is not connected with tapping or other forms of treatment, and that it is the same thing that causes improvement in almost all cases treated by abdominal section, even when pathological conditions in the peritoneal cavity are not removed or are not even found. Thus cases of neurasthenia, hysteria, epilepsy, pelvic pain, etc., are usually temporarily benefited by an abdominal section, although they may lose the benefit later.

This something, according to my observation, is the preparatory and after-treatment of that which belongs to abdominal section. There is no doubt but that the medical treatment, ordinarily used, for subacute and chronic tubercular peritonitis is in some respects similar in nature to that belonging to peritoneal section, but it deviates in laying more stress upon nourishment and tonics and less upon intestinal rest, intestinal depletion, and intestinal disinfection,—*i.e.*, it deviates in the most essential parts.

The quickest and best way of explaining the application of the treatment is, I think, to report a case in point.

Mrs. L. B. L., age thirty-three years, married thirteen years, five children, youngest two and a half years old, one abortion, twelve years ago, was treated for pulmonary tuberculosis fifteen years ago, at which time she had severe cough that lasted about two years. For a time the cough was much worse lying down, and she had to sleep in a chair. She has had a slight cough ever since.

In December, 1898, she complained of abdominal soreness and pains for two weeks, when the menstrual period, which had

been normal, came on with an increase of pains. The flow was slight for five days, and then profuse for five days.

She felt somewhat better until January 20, 1899, when she menstruated with some pain and was bloated. On the 1st of February she was taken down with acute peritonitis, accompanied by an increase of the abdominal distention.

The highest daily temperature ranged between 102° and 103° F.

She was brought to me for an operation February 26, at which time the temperature ranged between 99.8° and 102.6° F., always from one and a half to three degrees higher in the afternoon than in the morning. The pulse varied between 90 and 110, but was poor in quality. An encysted peritonitis was diagnosed, the accumulation of fluid reaching above the level of the umbilicus on the left side, and not quite as high up on the right. By vaginal indagation some induration could be felt beside the uterus. She was put upon strychnine, one-twentieth grain, and ten minims of the modified tincture of the citro-chloride of iron, three times daily, after meals, one drachm of sulphate of magnesia, twice daily, and half an ounce of brandy, four times daily.

Hot applications were applied to the abdomen. She was allowed a piece of broiled steak for dinner, thoroughly dried toast, three times daily, and liberal quantities of fluids. At the end of a week she was allowed an egg-nog every morning.

At the end of two weeks (March 9) the temperature and abdominal enlargement were the same, although the pulse remained between 90 and 100 and the nutrition and general appearance of the patient had improved. I now considered it the best time to operate, and gave her four grains of the mild mercuric chloride at bedtime, to be followed by salines the next morning, etc. By the next day I had made up my mind to give the plan of treatment I have been speaking of a trial, and proceeded to carry it out. The salines were stopped after sufficient had been given to produce four bowel movements, and then continued in drachm doses, twice or three times daily, as necessary to produce two semiliquid stools each day. All solid foods were withdrawn, and six ounces of peptonized milk, alternated with one ounce of liquid peptonoids, three hours apart, were ordered. Six grains of salol were prescribed four times daily. The iron and strychnine and brandy were continued. After three days a small quantity of thoroughly

dried toast was allowed, three times daily, and the diet was kept the same for ten days, or until March 20. After that she took Mellin's food a part of the time instead of the milk, and was allowed a little cottage cheese, butter, 40 per cent gluten biscuit, and from one to two ounces of a delicate cereal, such as corn-starch or rice, once daily.

From this time the improvement was steady. I marked the upper border of the fluid with ink each week, and demonstrated a steady diminution until, when she left the hospital, April 1, there was no dulness on the right side of the median line, and only a narrow border, extending from Poupart's ligament over the crest of the ilium, on the left side. The pains and tenderness and abdominal enlargement were gone, and she was gaining flesh. The temperature seldom reached 100° F., but usually marked from 99.2° to 99.6° in the afternoon.

I was unable to keep her under observation until cured, and am not attempting to prove that she is or will be cured. I am merely endeavoring to illustrate the effects of a certain method of treatment, as compared with abdominal section, upon the progress of the disease.

The progress of this case demonstrated to those of us who watched it that whenever the nourishment was pushed during the first two weeks the severity of the symptoms was increased. From the time that she was put upon the strictly liquid diet, salines, and salol the improvement was marked and sustained.

I am not discussing remote results, for that belongs to the future, but my experience with this and with similar cases that had been subjected to an operation has convinced me that in subacute as well as acute tuberculous peritonitis we must, for the moment, make the supporting treatment subservient to that of the inflammation, and that the *treatment of the alimentary canal*, in addition, of course, to the use of tonics and stimulants, is the one upon which we should depend. If we destroy the sources of local irritation, nature (if I may be allowed an ancient term) will often do the rest.

We should endeavor to keep the alimentary canal as asep-

tic as we do during and just after an abdominal section, and this, of course, applies also to the prodromic stage. Two or three liquid stools should be produced daily by salines. Eight or ten grains of salol, guaiacol, or an equivalent, should be given from three to four times daily to aid in disinfecting the alimentary canal, and possibly in producing some effect upon the bacilli. The diet should be entirely liquid, and should be such as to produce the minimum of gas or solid residuum in the intestinal canal.

If it is thought wise to try to affect the disease by mercurials, I think that calomel or blue mass would be better than inunction, because it would stimulate the action of the liver and aid in disinfecting the intestinal canal.

The same rest in bed is necessary as after an abdominal section. In subacute cases the patient usually tries to be up and about, and this increases the inflammation.

In subacute and chronic cases opium should never be given under any circumstances, except to check a diarrhœa that resists other medication. A proper restriction of the diet and hot fomentations, or an ice-bag, will relieve the pain, while bismuth and soda in connection with the salol and guaiacol will check a tendency to diarrhœa. Ordinarily I do not give bismuth, because I do not wish to check the action of the bowels.

If the same rapid improvement can thus be obtained without the abdominal incision, then the incision will be indicated only in the severe or neglected cases, in which the fluid cannot be made to disappear by absorption. Even then tapping can be substituted by those who have not the facilities for an aseptic section. At least there will be no excuse for opening the abdomen early and before time for absorption has been given, and before the intestinal treatment has been thoroughly tried.

If more innocuous specific germicides shall be discovered for tuberculosis, it is possible that they can be given by mouth or per anum, in sufficient quantities and for a sufficient length of time, to destroy the bacilli in the tissues. I have depended

mainly upon intestinal asepsis. Perhaps in the future intestinal antiseptics may add to its efficiency.

I would therefore recommend the following treatment:

During the first few days of an acute attack the usual treatment for acute peritonitis would be indicated. After the first few days no opium, but the continuation of hot fomentations, if necessary, for pain and discomfort.

Enough calomel may be administered to turn the stools to a dark green. As soon as the stomach will tolerate them salines are to be given in divided doses, to produce two or three soft or liquid stools daily.

The diet must be fluid and in regulated quantities, so as to produce no intestinal gases, until the subacute symptoms have passed, and then only such solid may be allowed as will neither leave a solid residuum nor produce gas either in the stomach or bowels. It is the want of strict and intelligent attention to what is taken as nourishment that leads to intestinal pain, distention, nausea, increase of the peritonitis and effusion, and the necessity for an opiate.

Salol, guaiacol, or creosote are indicated both for their antiseptic action and for a possible effect upon Koch's bacillus.

The patients must be kept quietly in bed until all abdominal tenderness is gone, and the afternoon temperature is almost normal, and they must be careful to be more quiet whenever there is any rise in temperature or indications of abdominal tenderness or pain.

Tonics, stimulants, and general remedies that may be found curative of tuberculous infection are not to be neglected.

The patient must be kept under systematic treatment for several months, and should be cautioned to restrict her diet to food that will be easily digested and non-irritating to the bowels, for we know that nine out of ten people who are not careful in eating are almost constantly subject to more or less intestinal irritation.

